

**Montana Board of Oil and Gas Conservation
Environmental Assessment**

Operator: Stealth Energy, USA Inc.
Well Name/Number: Murnion 11-1
Location: SW SE Section 11 T14N R26E
County: Petroleum, **MT;** **Field (or Wildcat)** W/C

Air Quality

(possible concerns)

Long drilling time: No, 6 to 10 days drilling time.

Unusually deep drilling (high horsepower rig): No, single or double derrick drilling rig to drill to 3,200' TD vertical Heath Formation.

Possible H₂S gas production: Slight.

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

- ☐ Air quality permit (AQB review)
- ☐ Gas plants/pipelines available for sour gas
- ☐ Special equipment/procedures requirements
- ☐ Other: _____

Comments: No special concerns – using a single or double derrick drilling rig to drill to 3,200' TD Heath Formation test.

Water Quality

(possible concerns)

Salt/oil based mud: No, freshwater, freshwater mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to Mc Donald Creek, about 1/4 of a mile to the north from this location.

Water well contamination: No, closest water well is about 5/8 of a mile to the southeast and 3/4 of a mile to the northwest from this well. Depth of these stock water wells are 24' to 1425'. Surface hole will be drilled with freshwater and freshwater muds to 320' and steel 8 5/8" surface casing will be run and cemented to surface from 320' to protect ground water.

Porous/permeable soils: No, sandy silty clay soils.

Class I stream drainage: No, Class I stream drainage in the area.

Mitigation:

- ☐ Lined reserve pit
- ☒ Adequate surface casing
- ☐ Berms/dykes, re-routed drainage
- ☐ Closed mud system
- ☐ Off-site disposal of solids/liquids (in approved facility)
- ☐ Other: _____

Comments: 320' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud system to be used.

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings: None, only ephemeral drainages will be crossed.

High erosion potential: No, small cut, up to 1.0' and small fill, up to 0.5', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, a large wellsite of 200'X240' location size required.

Damage to improvements: No, slight, surface use is CRP.

Conflict with existing land use/values: Slight

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other _____

Comments: Access will be from existing county road, #244 and existing two ranch road Will build about 0.65 miles of new access road. Drilling fluids allowed to dry in the pits Drill cutting will be disposed of in the earthen reserve pits, after being allowed to dry. Earthen pits will be backfilled when dry. No special concerns.

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residences are about 3/4 of a mile to the northwest from this location. The town of Winnett, Montana is about 2 miles to the northeast from this location.

Possibility of H₂S: Slight

Size of rig/length of drilling time: Single or double derrick drilling rig/length of drilling time, 6 to 10 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H₂S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: _____

Comments: Adequate surface casing and operational BOP equipment should mitigate any problems.

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: None identified.

Threatened or endangered Species: Threatened or endangered species listed are the Black-footed Ferret and the Pallid Sturgeon. Proposed listing is the Mountain Plover.

Candidate specie is the Greater Sage Grouse.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

___ Screening/fencing of pits, drillsite

___ Other: _____

Comments: Private surface lands. No live water nearby. Utilizing existing roads and two track well access road for most of the access into this location. Surface is CRP. No concerns.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites None identified

Mitigation

___ avoidance (topographic tolerance, location exception)

___ other agency review (SHPO, DSL, federal agencies)

___ Other: _____

Comments: On private surface lands. No concerns.

Social/Economic

(possible concerns)

___ Substantial effect on tax base

___ Create demand for new governmental services

___ Population increase or relocation

Comments: No concerns.

Remarks or Special Concerns for this site

Well is a 3,200' TD vertical hole to the Heath Formation.

Summary: Evaluation of Impacts and Cumulative effects

No long term impacts expected. Some short term impacts will occur with the drilling of this well.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: September 1, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Petroleum County water wells

(subject discussed)

September 1, 2010

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Petroleum County

September 1, 2010

(date)

If location was inspected before permit approval:

Inspection date: _____

Inspector: _ _____

Others present during inspection: _____